

Flat Knitting Patellar Strap With Silicone Pad Empowering Steriger Sports Medicine Worldwide

Zhejiang Steriger Sports Medicine Technology Co., Ltd.

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Zhejiang Steriger Sports Medicine Technology Co., Ltd. (“Steriger” or “the Company”) is a distinguished manufacturer dedicated to the design, development, and production of high-quality orthopedic and sports medicine support products. Headquartered in Zhejiang Province, China, Steriger has carved a strong reputation as a trusted name among athletes, physical therapists, medical distributors, and global customers seeking reliable knee, joint, and limb support solutions. With an unyielding commitment to innovation, quality control, and customer satisfaction, Steriger has grown into a leading provider of sports medicine supports globally—and stands out particularly for its Flat Knitting Patellar Strap With Silicone Pad, engineered to meet both performance and comfort standards in athletic and therapeutic environments.

Company Overview

Founded in 2010, Steriger was established with the core mission of bringing advanced, durable, and comfortable sports medicine products to a worldwide market. Over more than a decade of steady growth, Steriger has expanded its manufacturing capabilities, strengthened its research and development, and built a global network of distributors, medical professionals, sports teams, and retailers. Today, Steriger is recognized not only for its high-performance knee braces and support products but also for its philosophy of blending cutting-edge textile technology with ergonomic design to meet the evolving needs of athletes and patients alike.



Steriger’s mission is centered on delivering orthopedic and sports support products that balance durability, comfort, and efficacy — ensuring that users can count on reliable protection, pain relief, and support whether in intense sports training, injury recovery, rehabilitation, or everyday physical activity. With a customer-centric approach that values user experience and outcome, Steriger maintains a culture of continuous improvement, integrity, and global outreach.

2. Product Range

Steriger specializes in a broad spectrum of sports medicine support products, with a focus on knee-related supports, braces, straps, and compression gear. Among these, the standout offering is the Flat Knitting Patellar Strap With Silicone Pad, but Steriger’s product line extends further to meet various orthopedic needs.

Patellar Straps and Knee Supports

Flat Knitting Patellar Strap With Silicone Pad: Designed for individuals experiencing patellar pain, runner's knee, jumper's knee, or needing extra support during physical activity. The flat-knitted design ensures a snug yet comfortable fit; the silicone pad provides targeted pressure to relieve stress on the patellar tendon — making it ideal for athletes, fitness enthusiasts, or patients recovering from knee injuries. Benefits include:

Precise pressure distribution to reduce tendon strain

Slim, low-profile profile that fits comfortably under clothing or athletic gear

Durable, stretchable knit that maintains shape and tension over extended use



Standard Knee Braces: Hinged braces for serious injuries or post-surgical support; compression sleeves for mild support and improved circulation; adjustable open-patella sleeves for flexibility and joint mobility.

Ankle, Elbow, Wrist Supports and Compression Gear

Elastic braces and sleeves for ankle stability, valuable for runners and basketball players.

Elbow and wrist compression braces, helpful for repetitive strain injuries or weightlifting.

Shoulder and Back Supports

Adjustable shoulder braces for rotator-cuff support or posture correction.

Lumbar support belts and posture-correction supports, useful for both athletes and individuals with sedentary lifestyles.

Rehabilitation and Post-Surgery Supports

Soft braces and support straps intended for post-operative recovery or injury rehabilitation.

Modular support kits that can be adjusted as healing progresses.

Compression and Athletic Performance Wear

Compression sleeves and socks to improve circulation and aid muscle recovery.

Supportive sleeves for thighs, calves, or arms — helping with muscle fatigue during long training sessions.

Across this product range, Steriger prioritizes material quality, ergonomic design, and real-world performance — striving to meet the needs of both recreational athletes and professionals.

3. Advanced Manufacturing Process

At the heart of Steriger's success lies its investment in advanced manufacturing technologies and rigorous production processes. Steriger's modern facilities are equipped with flat-knitting machines, high-precision sewing and binding units, silicone-injection molding stations (for pads), and automatic inspection systems. The production process is designed to ensure consistency, reliability, and high-quality output:

Flat-Knit Fabrication: The company uses specialized flat-knitting machines that produce seamless, flat fabrics — superior to traditional cut-and-sew methods. This ensures that supports such as the Flat Knitting Patellar Strap With Silicone Pad fit snugly, conform to body contours, reduce irritation, and deliver uniform compression and support.

Silicone Pad Integration: Silicone used in pads is biocompatible, hypoallergenic, and tested for safe skin contact. The silicone pads are molded with precision to match anatomical pressure points, then integrated securely into knitted sleeves or straps through a combination of heat-press and stitching methods — ensuring durability, consistent pressure application, and resistance to delamination even after repeated use and washing.

Quality Sewing and Assembly: All seams are reinforced using double or triple stitching, depending on product type; edges are bound or hemmed to avoid fraying. Adjustable straps employ high-strength Velcro (hook-and-loop fasteners) or medical-grade elastic bands, ensuring secure fit and ease of adjustment.

Automated and Manual Inspection: After assembly, each product goes through multiple inspection phases — automated tests for strap elasticity, silicone pad adherence, and dimensional consistency; manual inspection for finish quality, seam integrity, labeling, and packaging. Steriger's assembly lines integrate automatic rejection for defects, minimizing faulty products reaching the market.

Clean, Safe Manufacturing Environment: The production facility maintains strict hygiene, dust-proofing, and humidity control. Materials — from knit yarns to silicone compounds — are stored under controlled conditions to prevent contamination or degradation, and workers follow protocols for cleanliness, including wearing protective garments when handling silicone or adhesive components.

This modern manufacturing approach allows Steriger to produce high volumes of support products without compromising the comfort, safety, or effectiveness of each item.

4. Quality Control and Certification



Quality control forms the backbone of Steriger's operations. The company has instituted a comprehensive quality assurance protocol that spans from raw material procurement to final product dispatch — ensuring that every item meets high performance, safety, and durability standards. Key elements include:

Material Sourcing and Testing: Steriger sources high-grade elastic yarns, moisture-wicking knits, and medical-grade silicone compounds from reputable suppliers. Before use, each batch of raw material undergoes testing for tensile strength, elasticity retention, skin safety (for silicone), and compliance with international safety and hygiene standards.

In-process Monitoring: At each production stage — knitting, silicone pad molding, assembly, stitching — designated quality inspectors verify tension, alignment, seam integrity, pad positioning, and finish. Non-conforming items are immediately flagged and removed from the line.

Final Product Testing: Finished products are subjected to stress testing: repeated stretching cycles, compression testing to ensure consistent pressure delivery, wash-and-wear durability tests, and pad adherence under repeated flexing. Straps and braces must maintain elasticity, fit, and support after many cycles to pass.

Compliance with International Standards: Steriger aligns its quality systems with recognized international quality management frameworks. The Company maintains compliance with ISO 13485 (Medical Devices Quality Management Systems) and adheres to relevant ASTM and CE standards (where applicable) for orthopedic and sports support devices. Every batch is documented with traceability logs, ensuring accountability and compliance transparency.

Continuous Improvement and Feedback Integration: Steriger tracks performance feedback from customers, distributors, medical professionals, and rehabilitation centers. Any reports of product failure or discomfort prompt root-cause analysis, after which design, material, or process adjustments are made as part of Steriger's continuous improvement program.

Through these measures, Steriger ensures its products are not only effective and durable but also safe and reliable for end-users — whether they are elite athletes, rehabilitation patients, or everyday individuals seeking support during physical activity.

5. Sustainable Practices

As global awareness of environmental responsibility grows, Steriger remains committed to sustainable and eco-friendly manufacturing practices. The company actively pursues methods to reduce waste, improve energy efficiency, and promote reuse and recycling where possible. Key

sustainability initiatives include:

Efficient Material Utilization: The flat-knitting process minimizes fabric waste compared to traditional cut-and-sew methods. Yarn usage is optimized, and off-cuts are collected for reprocessing or recycling whenever possible.

Recycling of Silicone and Elastics: Steriger collects production scraps — leftover silicone fragments, unusable elastic bands, and waste yarn — and partners with recycling vendors to ensure that these materials are reprocessed or disposed of in environmentally responsible ways.

Energy-Efficient Operations: Production facilities incorporate LED lighting, energy-efficient heating and cooling systems, and motion-sensor power control in less frequently used areas. Steriger also invests in modern knitting machines that consume less energy per unit produced than older models.

Water Conservation and Wastewater Management: In processes where water is used — such as washing knit fabric or cleaning equipment — Steriger employs closed-loop water systems, filtration, and reuse protocols to reduce water waste and minimize discharge of contaminants.

Eco-Friendly Packaging: Final products are packaged using recyclable or biodegradable materials, reducing reliance on single-use plastics. Steriger designs packaging to be compact yet protective, reducing shipping volume and carbon footprint during transportation.

By integrating sustainability into manufacturing, Steriger demonstrates that high-performance sports medicine products can be produced responsibly — balancing business growth with environmental stewardship.

6. Research and Development

Innovation sits at the core of Steriger's strategy. The Company maintains a dedicated R&D team that works closely with sports medicine professionals, physical therapists, orthopedic specialists, and textile engineers. This collaborative approach fuels continual enhancement of existing products and development of new support solutions. Key aspects of Steriger's R&D initiatives include:

Data-Driven Product Design: Steriger collects and analyzes data on injuries, common pain points among athletes, ergonomic requirements, and performance feedback. This data informs the design of supports that address real-world needs — such as pressure distribution at the knee, comfort during prolonged use, mobility restrictions, or targeted muscle stabilization.

Material Innovation: The R&D team explores new knit structures, compression fabrics, moisture-wicking and antibacterial yarns, advanced medical-grade silicone formulations, and hybrid materials that combine elasticity, breathability, and durability. For example, recent prototypes test the use of antimicrobial yarns to reduce odor and skin irritation for users who wear supports for extended periods.

Ergonomic Engineering and Biomechanics: Working with sports scientists and physiotherapists, Steriger evaluates how braces and straps interact with human anatomy under dynamic movement. This helps optimize pad shapes, strap tension points, and support geometry so that devices such as the Flat Knitting Patellar Strap With Silicone Pad not only provide support but also enhance comfort and reduce risk of further injury.

Prototyping and User Trials: Once a new design is completed, Steriger creates prototypes for real-world testing — from amateur runners to professional athletes and rehabilitation patients.

Feedback from these trials is used to refine fit, adjust compression levels, improve ease of use, and ensure long-term comfort.

Regulatory and Safety Research: The R&D team monitors evolving standards and regulations in global markets — including medical device classifications, labeling requirements, biocompatibility standards — to ensure that Steriger's products remain compliant across different regions. This forward-looking approach enables Steriger to quickly adapt products for new market entries or regulatory changes.

Thanks to this robust R&D framework, Steriger continues to push the boundaries of what sports medicine supports can deliver — blending medical-grade functionality with athletic-level performance and comfort.

7. Customer Satisfaction and After-Sales Service

Steriger recognizes that product quality alone is not enough — reliable customer support, technical guidance, and after-sales service are critical to building long-term partnerships with distributors, medical institutions, retailers, and end-users. Steriger's customer-centric approach includes:

Dedicated Customer Support Teams: Steriger maintains dedicated support channels — email, phone, and live chat — staffed by knowledgeable professionals who can answer technical questions, recommend appropriate products, or assist with sizing, fitting, and usage instructions.

Technical Documentation and Guides: Each product is supplied with clear instructions for use, cleaning, sizing guidelines, and maintenance advice. For instance, the Flat Knitting Patellar Strap With Silicone Pad includes guidelines on correct strap placement, how tight to secure it, washing instructions to preserve elasticity and pad adhesion, and recommended replacement intervals based on usage frequency.

Warranty and Guarantee Policies: Steriger offers a limited warranty on manufacturing defects — covering faulty seams, delamination of pads, or significant elasticity loss within a specified period. This instills confidence among buyers and reflects the company's commitment to lasting quality.

Feedback and Improvement Loop: Every complaint, suggestion, or user feedback — whether from professional athletes, physical therapists, clinic patients, or retail customers — is logged, analyzed, and reviewed by the relevant internal teams. This process helps Steriger identify areas for improvement, whether in fit, comfort, durability, or packaging.

Training and Partner Support: For distributors, resellers, medical clinics, or sports centers, Steriger provides onboarding materials, product training, marketing support, and even kiosks or demo units in some markets. This empowers partners to better recommend and fit products for end-users, enhancing overall satisfaction and success of use.

Through these efforts, Steriger builds lasting relationships with customers, ensuring they receive not only high-quality support products but also comprehensive assistance, reliability, and trust — vital in the fields of sports medicine and rehabilitation.

8. Global Market Reach

From its home base in Zhejiang, Steriger has expanded to serve clients across multiple continents. The Company's global market strategy emphasizes partnerships with medical distributors, sports retailers, rehabilitation centers, clinics, and e-commerce platforms to make

its products available worldwide. Key milestones in Steriger's international presence include:

Export and Distribution Network: Steriger has established partnerships in over 40 countries across Europe, North America, Asia, Africa, and the Middle East. Key markets include the United States, Canada, Germany, United Kingdom, Australia, Brazil, South Africa, Japan, South Korea, and the UAE — reflecting the high demand for sports medicine supports worldwide.

Compliance with International Regulatory Requirements: To facilitate smooth market entry, Steriger ensures all products meet medical device regulations and standards applicable to each region — including CE marking in Europe, FDA-related export documentation for the United States, and relevant medical device approvals in other jurisdictions.

Localized Packaging and Labeling: Products intended for different markets are packaged with language-appropriate labels, sizing charts, care instructions, and regulatory compliance information. This localization facilitates acceptance by distributors and end-users in diverse regions.

Marketing, Sponsorships, and Partnerships: Steriger engages with sports teams, athletic coaches, physical therapy clinics, and rehabilitation centers to raise awareness of its products. By supplying demo units, sponsoring events, and offering trial programs, Steriger builds credibility, visibility, and long-term relationships in new markets.

E-Commerce and Direct-to-Consumer Reach: Recognizing the shift toward online shopping, Steriger sells through its own website and global e-commerce platforms, enabling customers around the world to order directly — often with multi-lingual customer support, international shipping options, and hassle-free returns or exchanges.

This global outreach underscores Steriger's commitment to ensuring that high-quality sports medicine supports — including the flagship Flat Knitting Patellar Strap With Silicone Pad — are accessible to athletes, patients, and physical-therapy clients worldwide.

9. Vision for the Future

Looking ahead, Steriger aims to build on its success by broadening its product portfolio, entering emerging markets, and continuing to innovate. Some of the strategic initiatives on Steriger's roadmap include:

Expanded Product Lines: Developing advanced compression garments, sport-specific supports (e.g., for basketball, soccer, cycling), and customizable orthopedic solutions tailored to athlete biomechanics or rehabilitation needs.

Smart Wearable Integration: Exploring the incorporation of sensors and smart textiles into support gear — for instance, integrating pressure sensors, motion trackers, or temperature-monitoring fabrics to provide real-time feedback for rehabilitation or performance optimization.

Sustainable Material Innovation: Investing in bio-based elastics, recyclable knit materials, and eco-friendly silicone alternatives — further minimizing environmental impact while maintaining high product performance.

Global Medical Collaboration: Partnering with hospitals, rehabilitation centers, sports science institutes, and universities internationally to conduct clinical trials, gather performance data, and validate the effectiveness of Steriger products in therapeutic and athletic contexts.

Enhanced Customer Experience: Expanding after-sales services, offering custom sizing or made-

to-measure supports, launching mobile apps or web portals for guidance, usage tracking, and product recommendations — making Steriger not just a product vendor but a holistic sports medicine partner.

With these goals, Steriger envisions a future where sports medicine supports are more than just braces or straps — they become part of an integrated ecosystem that improves performance, supports rehabilitation, and enhances overall well-being.

Conclusion

Zhejiang Steriger Sports Medicine Technology Co., Ltd. stands at the intersection of textile innovation, orthopedic science, and customer-oriented manufacturing. By focusing on quality, comfort, durability, and global accessibility, Steriger has established itself as a trusted provider of sports medicine supports — particularly with its signature Flat Knitting Patellar Strap With Silicone Pad, which combines ergonomic design, medical-grade materials, and real-world usability.

Whether serving professional athletes seeking peak performance, individuals in rehabilitation recovering from injury, or everyday users needing reliable joint support, Steriger's comprehensive product line, advanced manufacturing processes, rigorous quality control, sustainability commitment, and customer-centric services make it a global leader in sports medicine technology.

For more information or to explore Steriger's full product range, please visit: <https://www.steriger.com/>